

CITY OF NEWTON PAVEMENT MANAGEMENT



STREETSCAN

Data Fusion

A key output from the StreetScan system is a summary condition rating for each street known as the equivalent Pavement Condition Index (ePCI). The ePCIs are obtained using a custom data fusion methodology that combines results from every sensor.

Front Camera

Useful for inspecting road assets like signage, striping, street lights, curbs, sidewalk conditions, and hydrants.

GPS

Geotags results from all sensors.

Rear Camera

Detects cracks. The types of cracks (e.g. alligator, longitudinal, transverse) and their severity.

Surface Radar Array

Detects larger scale distresses like potholes, rutting, bumps, and depressions. Additionally, detects the material of the driving surface such as pavement, gravel, water, or metal (e.g. manholes, drainage, expansion joints).

Ground Penetrating Radar Array

Measures underneath the surface to determine the thickness of each pavement layer.

Tire Pressure Sensor – Driver Side

Measures International Roughness Index (IRI), an ASTM standard related to how safe and comfortable a road is to drive on. A second tire pressure sensor is installed on the passenger side of the vehicle.

Microphone – Driver Side

Measures Mean Texture Depth (MTD), an ASTM standard related to road texture and friction. A second microphone is installed on the passenger side of the vehicle.



Roadway Evaluations

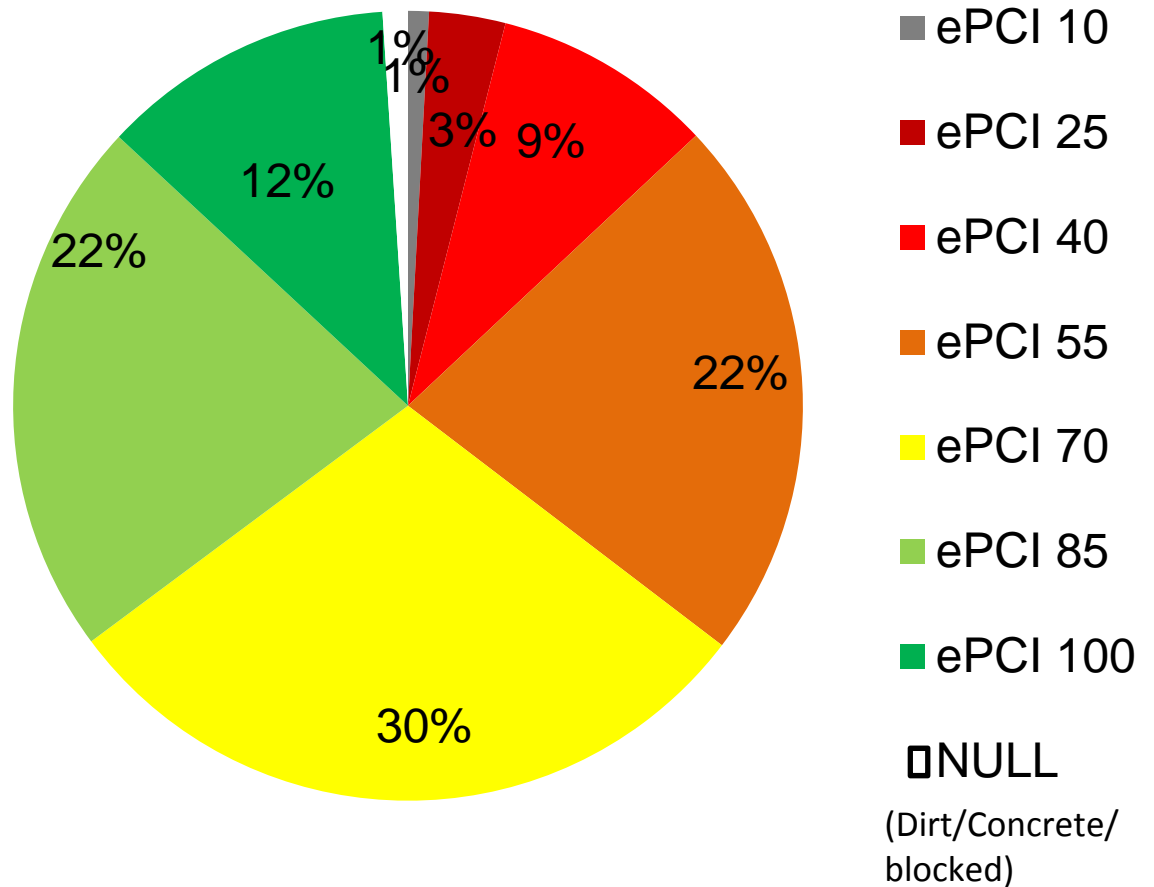
- 276 Miles of Road
- 201 Miles of Local Roads
- 75 Miles of Arterial & Collector Roads

Pavement Condition Index (PCI)

	Standard PCI™ Rating Scale	Suggested Colors
100	Excellent	Dark Green
85	Very Good	Light Green
70	Good	Yellow
55	Fair	Light Red
40	Poor	Medium Red
25	Very Poor	Dark Red
10	Failed	Dark Grey
0		

Distribution of PCI

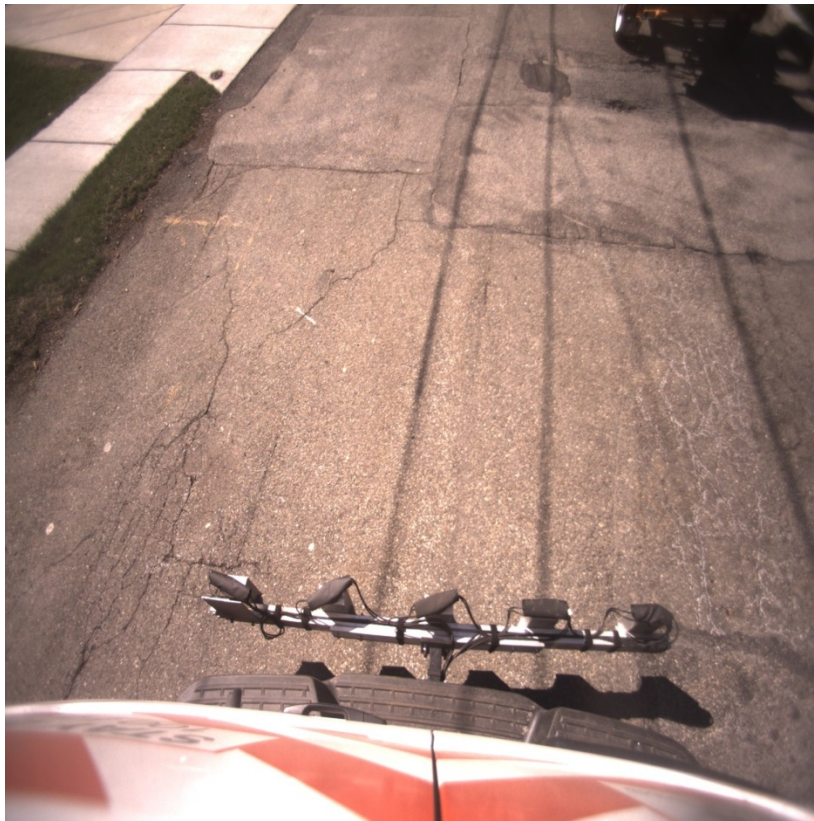
Average PCI	62.5
% < Critical PCI (55)	35%
% > Critical PCI (55)	65%



Current average PCI for 201 Miles of Local Roads is 59.3

PCI 50 -59

Avondale Road - 55



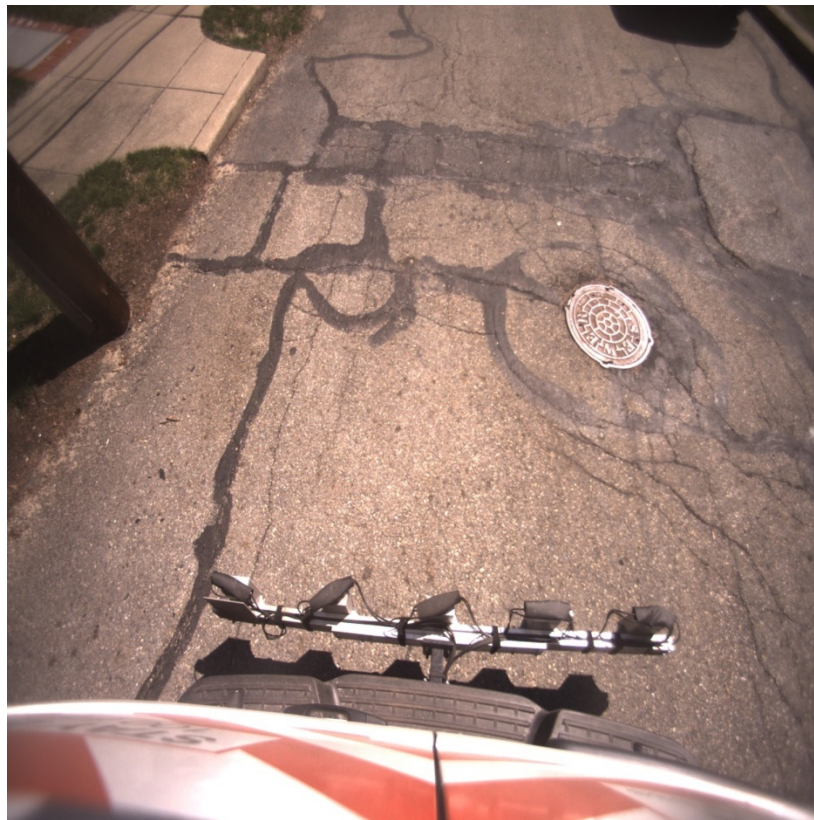
Marshall Street - 50



Current average PCI for 75 Miles of Arterial & Collector Roads is 69.5

PCI 60-69

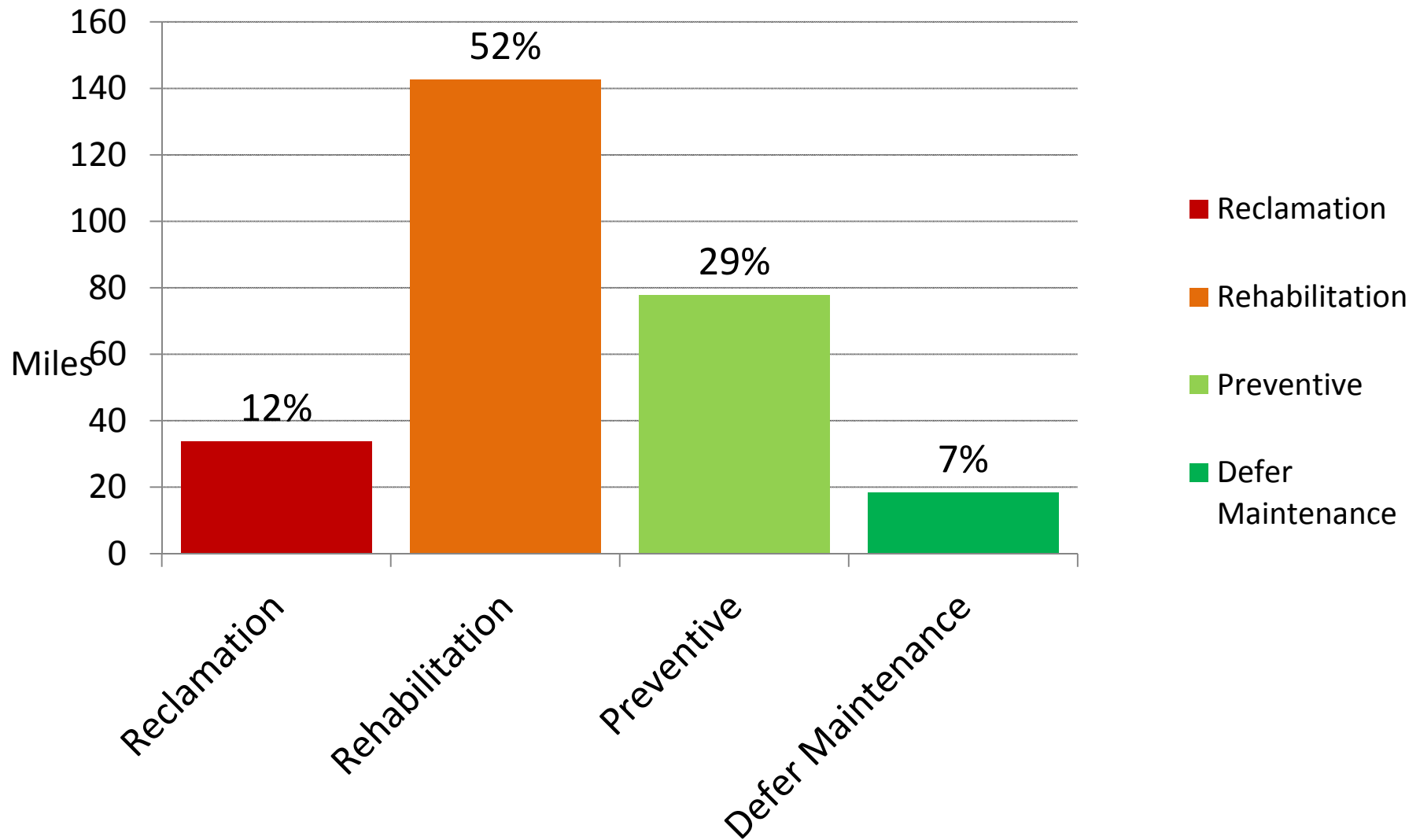
Kenilworth Street - 60



Parsons Street - 65

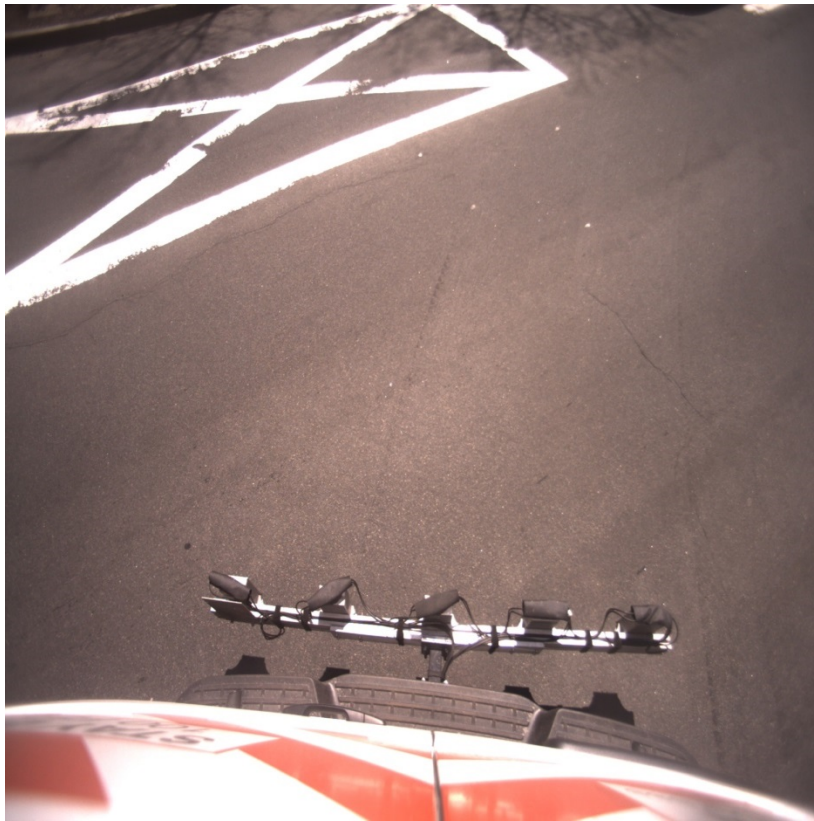


Breakdown by Repair Type



PCI 80 -89

Valentine Street

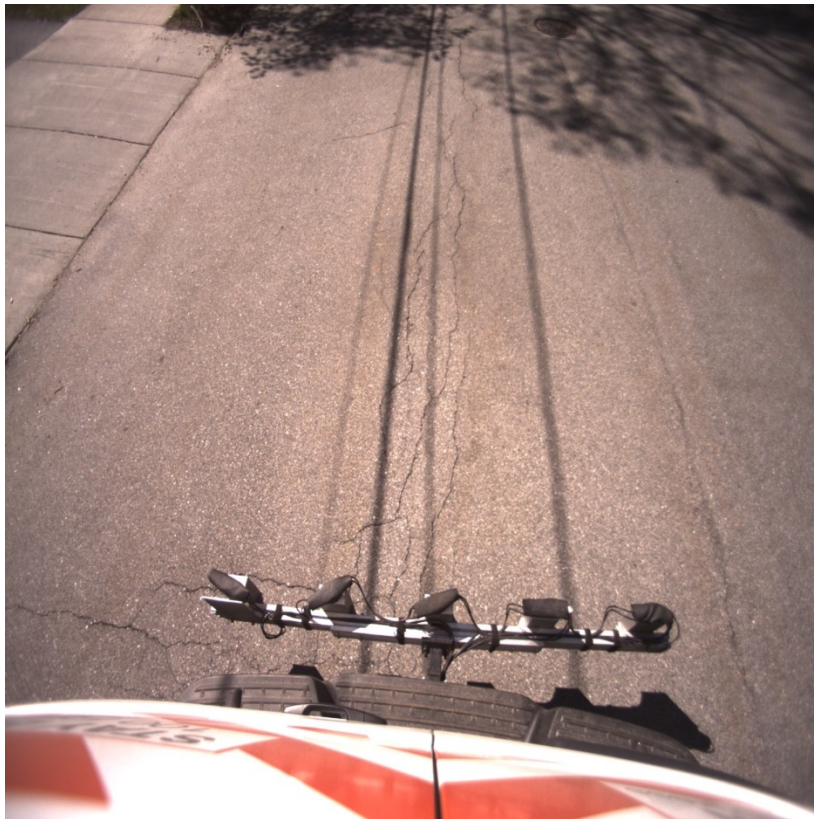


Allen Avenue



PCI 70 - 79

Allen Avenue



Allen Avenue



